

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A file server system comprising:
a plurality of hard disk drives ~~connected to~~ communicatively coupled with a plurality of clients via a network, each hard disk drive in the plurality of hard disk drives including authentication information identifying one or more devices on the network that are permitted to directly communicate with said each hard disk drive; and
a file control unit ~~connected to~~ communicatively coupled with the plurality of hard disk drives and the plurality of clients via the network, wherein the file control unit ~~for accepting an access request~~ accepts requests from said plurality of clients to access said plurality of hard disk drives, thereby managing to manage the data input/output input and output of said plurality of hard disk drives,
wherein said file control unit ~~[[has]]~~ includes configuration information ~~with which a plurality of pieces of identification (ID) information, each identifying one or more of said plurality of hard disk drives, can be registered and~~
wherein the file control unit is configured to:
~~said file control unit broadcasts~~ broadcast a hard disk drive search message to the plurality of hard disk drives via said network at each initialization of the file control unit,
~~wherein,~~ in response to the hard disk drive search message, receive from a hard disk drive in the plurality of hard disk drives ~~returns~~ ID information identifying itself the hard disk drive to said file control unit, and
~~wherein, in response to a result of comparing if the returned ID~~
information ~~with~~ is found in the configuration information of the file control unit, send to the hard disk drive a command to establish an entry in the authentication information of the hard

~~disk drive, wherein the entry prevents the hard disk drive from said file control unit establishes a setting such that the hard disk drive cannot directly communicate~~ communicating with devices on said network other than said file control unit.

2. (Original) The file server system according to claim 1, further comprising a management terminal connected to said file control unit to perform maintenance work.

3. (Original) The file server system according to claim 2, further comprising a firewall connected between said file control unit and said hard disk drives for controlling communication between said management terminal and said hard disk drives.

4. (Original) The file server system according to claim 2, wherein said file control unit comprises a priority unit that puts a higher priority on communication with said management terminal than on communication with said clients and on communication with said hard disk drives.

5. (Original) The file server system according to claim 1, wherein said file control unit and said plurality of hard disk drives have an iSCSI internet small computer system interface (iSCSI) interface for communication on the network using the internet protocol (IP).

6. (Canceled)

7. (Currently Amended) The file server system according to claim [[6]] 1, ~~wherein said hard disk drive comprises authentication information with which identifiers of part or all devices connected to said network and authentication codes corresponding to the identifiers of the devices can be registered, said identifiers being used on said network and~~

~~wherein, upon receiving a communication permission from a device on said network, said hard disk drive compares an authentication code sent by the device with the~~

~~authentication codes registered with the authentication information, permits communication if a match is found, and inhibits communication if a match is not found~~

wherein each hard disk drive in the plurality of hard disk drives is configured to:

receive a communication request from a device on the network;

determine whether an authentication code sent by the device is found in

the authentication information for said each hard disk drive;

if the authentication code is found, allow the request; and

if the authentication code is not found, reject the request.

8. (Currently Amended) The file server system according to claim 7,

~~wherein, when said hard disk drive confirms that a device on the network is an owner of the particular hard disk drive and is registered in the authentication information, said file control unit allows said hard disk drive to change the authentication information according to an authentication information change instruction received from the device via the network~~

wherein the authentication information for said each hard disk drive includes an ownership flag identifying a device on the network as an owner of said each hard disk drive, and wherein the owner is permitted to modify the authentication information of said each hard disk drive.

9. (Currently Amended) The file server system according to claim 8,

~~wherein said file control unit issues the authentication information change instruction to said hard disk drive at system startup time to inhibit said hard disk drive from communicating with devices other than said file control unit, and~~ wherein the file control unit allows a requesting device on the network to set ~~[[an]]~~ the ownership flag in the authentication information of any hard disk drive in the plurality of hard disk drives in which no owner has been set yet.

10. (Original) The file server system according to claim 1,

wherein said file control unit comprises setting means that allows a manager of said file server system to set a ratio of an amount of data transferred in a communication between

said file control unit and said clients to an amount of data transferred in a communication between said file control unit and said hard disk drives and

wherein the amount of data transferred in the communication between said file control unit and said clients and the amount of data transferred in the communication between said file control unit and said hard disk drives are measured to control a priority of communication processing so that a ratio that is obtained by the measured data amounts approaches the ratio that is set.

11. (Previously Presented) A file server system comprising:
a plurality of switching hubs interconnected to form a network;
a plurality of hard disk drives connected to a plurality of clients via the network;
and

a file control unit,
each of said plurality of hard disk drives being connected to one of said plurality of switching hubs, said file control unit being connected to one of said plurality of switching hubs, said file control unit accepting an access request from said clients to said hard disk drives to manage a data input/output operation of said plurality of hard disk drives,

wherein said switching hubs perform connection control so that said file control unit and said plurality of clients belong to a first virtual network and so that said file control unit and said plurality of hard disk drives belong to a second virtual network, whereby the plurality of clients belonging to the first virtual network cannot directly communicate with the plurality of hard disk drives belonging to the second virtual network.

12. (Original) The file server system according to claim 11, further comprising a management terminal connected to one of said plurality of switching hubs to perform maintenance work for said file control unit.

13. (Previously Presented) The file server system according to claim 12, wherein said switching hubs perform control so that said file control unit and said plurality of clients belong to the first virtual network, so that said file control unit and said

plurality of hard disk drives belong to the second virtual network, and so that said file control unit and said management terminal belong to a third virtual network different from said first and second virtual networks.

14. (Previously Presented) The file server system according to claim 13, wherein each of said first and third virtual networks is a virtual LAN.

15. (Previously Presented) A file server system comprising:
a plurality of hard disk drives connected to a first local area network (LAN);
a file control unit connected to a plurality of clients via a second LAN, the file control unit configured to accept access requests from the plurality of clients to the plurality of hard disk drives to manage data input and output of the plurality of hard disk drives;

a management terminal connected to the second LAN, the management terminal configured to perform maintenance work for the file control unit; and

a firewall including an access control, the firewall being located between the file control unit and the plurality of hard disk drives on the first LAN, and between the file control unit and the management terminal on the second LAN,

wherein the access control of the firewall manages communication between the plurality of clients, the file control unit, the plurality of hard disk drives, and the management terminal such that communication is allowed directly between the file control unit and the plurality of hard disk drives, but communication is not allowed directly between the plurality of clients and the plurality of hard disk drives or directly between the management terminal and the plurality of hard disk drives,

wherein the access control of the firewall cannot be set by any of the plurality of clients or the management terminal, and

wherein the file control unit includes configuration information with which a plurality of pieces of identification (ID) information, each identifying one of the plurality of hard disk drives, can be registered.